

**EUROPEAN PATENT APPLICATION**

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**G10L 5/00**

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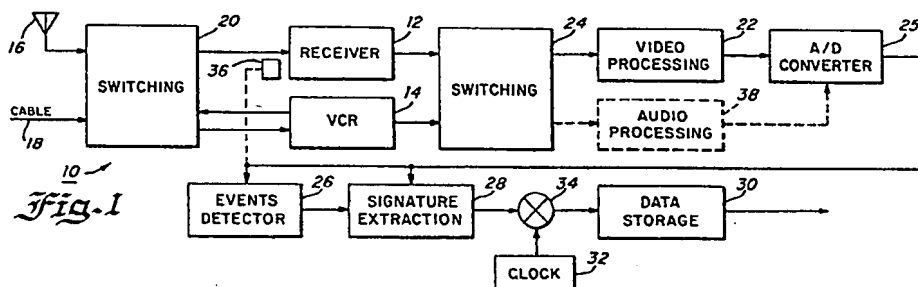
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**Signal Identification system.**

A system for identifying signals such as signals representative of television programs received from various sources detects the occurrence of predetermined events such as scene changes in the video signal and extracts a signature from the signal. The signatures and the times of occurrence of the signature are stored and subsequently compared with reference signatures to identify the signal. The signature may be compared in pairs to increase resolution, and the time interval between events or signatures may also be used to identify the signal, either by themselves or in conjunction with the signatures.





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# EUROPEAN SEARCH REPORT

Application Number

EP 87 11 8133

| DOCUMENTS CONSIDERED TO BE RELEVANT   |  |  |   |
|---|--|--|---|
| Category  | Citation of document with indication, where appropriate, of relevant passages  | Relevant to claim                              | CLASSIFICATION OF THE APPLICATION (Int. Cl.4) |
| X   | GB-A-1 282 641 (T. PATTERSON)<br>* Page 1, lines 37-83; page 2, lines 70-97; claims 1,2,9 *  | 1,2  | H 04 H 9/00<br>H 04 N 17/00<br>G 10 L 5/00    |
| Y   | ---  | 4  |   |
| A   | FR-A-2 520 539 (WESTERN ELECTRIC CO.)<br>* Claim 1 *   | 1-3  |   |
| Y,D   | US-A-4 230 990 (J. LERT et al.)<br>* Column 1, lines 6-40; column 3, line 46 - column 4, line 54; column 5, line 55 - column 8, line 61; column 9, line 26 - column 10, line 55; column 11, line 18 - column 14, line 55; column 15, line 5 - column 16, line 65; column 21, line 40 - column 22, line 19; figures * | 4  |   |
| A   | ---  | 1,2,7-10,12,14,15                              |   |
| A   | US-A-3 737 566 (R.H. BAER et al.)<br>* Claims 1,3 *  | 5,6  | TECHNICAL FIELDS SEARCHED (Int. Cl.4)         |
| A   | WO-A-8 301 526 (M. KOHLER et al.)<br>* Abstract *  | 1  | H 04 H<br>G 10 L                              |
| D,A   | US-A-3 919 479 (W.D. MOON)<br>* Claims *   | 1  |   |
| A   | JOURNAL OF THE SMPTE, vol. 84, March 1975, pages 162-163, Scarsdale, US; G. AUERBACH: "A pattern-recognition system for monitoring video and audio signals"<br>* Whole document *  | 1  |   |
|   | ---  | -/-  |   |
| The present search report has been drawn up for all claims  |  |  |   |
| Place of search<br>THE HAGUE  |  | Date of completion of the search<br>13-07-1988 | Examiner<br>MINNOYE G.W.                      |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |  |  |   |

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| DOCUMENTS CONSIDERED TO BE RELEVANT  |  |  |   |
|--|--|--|---|
| Category   | Citation of document with indication, where appropriate, of relevant passages  | Relevant to claim                              | CLASSIFICATION OF THE APPLICATION (Int. Cl.4) |
| A  | ICASSP 83, Boston, 14th-16th April 1983, vol. 2, pages 753-756, IEEE, New York, US; P.K. RAJASEKARAN et al.:<br>"Microcomputer implementable low cost speaker-independent word recognition"<br>* Abstract; page 754, right-hand column, Appendix A, A.1, A.2; figure 1<br>*<br>----- | 1  |   |
|  |  |  | TECHNICAL FIELDS SEARCHED (Int. Cl.4)         |
|  |  |  |   |
| The present search report has been drawn up for all claims   |  |  |   |
| Place of search<br>THE HAGUE   |  | Date of completion of the search<br>13-07-1988 | Examiner<br>MINNOYE G.W.                      |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |  |  |   |

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